

# Notice of Allowability

Application No.

09/876,944

Examiner

Marianne L. Padgett

Applicant(s)

BRAVO VASQUEZ ET AL.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to response of 3/24/04 & interview of 4/28+29/04.
2. ☒ The allowed claim(s) is/are 1-18 and 44-67.
3. ☒ The drawings filed on 08 June 2001 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All b) ☐ Some\* c) ☐ None of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

## Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date 4/23/04 & 4/28+29/04
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

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1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 3/24/04 has been entered.

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

In the specification:

In the amendment A to p.1, line 4 of the specification, insert --, now abandon-- after "2001".

In the claims:

This application is in condition for allowance except for the presence of claim 68 to the product non-elected without traverse. Accordingly, claim 68 has been cancelled.

3. The following is an examiner's statement of reasons for allowance: Applicants' amendment corrects previously rejected 112 problems, modifies & clarifies process limitations involving driving off. i.e. removal, of the by-products and unreacted precursors (metal complex), such that both actions are now separately required.

With respect to applicants' 3/24/04 arguments & the art rejections of paper #12, mailed 11/24/03, the 103 rejections over Hill et al, and Yundt or Lin will be withdrawn for the following reasons. Hill et al discloses an amorphous initial precursor film enables the photo-induced reaction to remove volatile by-products thereof, but that if the film were crystalline, then it would be difficult or impossible for such ligands to diffuse out (col.4, lines 34-37 & col.6, lines 25-60+),

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thus for use of mesomorphous films from a secondary reference to be shown to be an obvious alternative and read on the claims as now written, they must be shown to have the ability of the amorphous film to allow by-products to diffuse out during photo-processing. In Yundt, while the initial films microstructure reads on the claimed mesomorphous film, the irradiation process does not appear to cause or require that any by-products that can diffuse out be formed. The col.2-4 discussion in Yundt on order and flexibility in their deposited film would seem to suggest that diffusion should work similarly to that in Hill et al, but the photosensitive processing discussed in Ex. 2 or 8, does not appear to create any by-products of the type claimed, hence Hill et al + Yundt do not provide required features for the claims as presently written.

With respect to Lin, applicants' point concerning the solution being mesomorphic, but not the [dried] film (see esp. col.6, lines 25-30) appears correct, so Lin's laser treatment is to a film with no necessary mesomorphic nature, and without the presence of the surfactant, would be unlikely to be mesomorphous, thus would not supply this missing limitation to Hill et al.

Other art of interest includes Takai et al (6,645,571 B1), discussed in the interviews of 4/23,28 & 29/2004 with applicants' representative; Mizuta et al (6,576,302 B1) teach metal oxide deposition from a laser treated film of a metal organic precursor, but is silent as to the microstructure of the precursor film; and Hill et al (6,348,239 B1), Lee et al (6,696,363 B2), SN10/694,999 & SN 10/263,701 are copending cases to overlapping inventors, but while there is overlapping subject matter they are not prior art & have claims sufficiently differentiated from the present claims.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

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4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marianne L. Padgett whose telephone number is (571) 272-1425. The examiner can normally be reached on M-F from about 8:30 am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shrive Beck, can be reached on (571)272-1415. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MLP

4/30/04



MARIANNE PADGETT  
PRIMARY EXAMINER